

MONTHLY WEATHER REVIEW.

(GENERAL WEATHER SERVICE OF THE UNITED STATES.)

AUGUST, 1890.

CONTENTS.

	Page.		Page.
INTRODUCTION.....	197	INLAND NAVIGATION.....	212
Data used in preparing REVIEW.		Stage of water in rivers and harbors; Low water; Floods; High tides.	
CHARACTERISTICS OF THE WEATHER FOR AUGUST, 1890.....	97	ATMOSPHERIC ELECTRICITY.....	218
ATMOSPHERIC PRESSURE.....	198	Auroras · Thunder-storms.	
Comparison of means of 8 a. m. and 8 p. m. observations with means of hourly observations; General distribution; Comparison of means with those of previous month; Departure from normal; Monthly ranges; High pressure areas; Low pressure areas or storms.		MISCELLANEOUS PHENOMENA.....	218
NORTH ATLANTIC STORMS.....	200	Sun spots; Drought; Prairie fires.	
North Atlantic storms for August, 1890; Fog; Ocean ice.		VERIFICATIONS.....	214
TEMPERATURE OF THE AIR.....	202	Forecasts for 24 hours; Forecasts for 48 hours; Cautionary signals; Wind signals; Local verifications.	
General remarks; Deviations from normal temperature; Maximum and minimum temperature; Monthly and daily ranges; Frost; Temperature of water.		STATE WEATHER SERVICES.....	214
PRECIPITATION.....	204	Extracts and summaries from reports of the several services.	
General remarks; Deviations from average precipitation; Excessive precipitation; Hail; Snow; Sleet; Maximum rainfall in one hour, or less.		METEOROLOGICAL TABLES.....	216
WINDS.....	208	Data from voluntary observers; Late reports for July and August, 1890; Mean temperature for 13 years at Fort Davis, Tex., for 52 years at Muscatine, Iowa, for 31 years at Springdale, near Louisville, Ky., for 32 years at Green Springs, Ala., and for 25 years at Danville, Ky.; Precipitation for 45 years at Muscatine, Iowa, for 22 years at Fort Totten, N. Dak., and for 24 years at Danville, Ky.; Data from stations of the Signal Service.	
Prevailing directions; High velocities; Local storms; Wilkes Barre, Pa., tornado of August 19, 1890; Water-spouts.		CHARTS—I. Tracks of areas of low pressure; II. Isobars, isotherms, and winds; III. Precipitation.	

PREPARED UNDER THE DIRECTION OF
BRIGADIER GENERAL A. W. GREELY,
CHIEF SIGNAL OFFICER OF THE ARMY.

By H. A. HAZEN,
ASSISTANT PROFESSOR, SIGNAL SERVICE.

PUBLISHED BY AUTHORITY OF THE SECRETARY OF WAR.

WASHINGTON CITY:
SIGNAL OFFICE.
1890.